

REMARKS

The Applicant thanks the Examiner for the careful consideration of this application. Claims 1, 3, 5, 10, and 12-15 are currently pending. By this Amendment, claims 1, 3, and 10 have been amended, and new claims 13-15 have been added. Based on the foregoing amendments and the following remarks, the Applicant respectfully requests that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Allowable Subject Matter

The Applicant appreciates the Office Action's indication that claim 1 is allowed. Claim 1 has been amended to remove the recitation of "continuously exhausting primary, secondary, and tertiary air having the lightweight grains toward a horizontal opposite direction to the whirling direction of the raw grains in the cylindrical primary separation space," as previously claimed, and to recite instead that the exhaust step "continuously exhaust[s] primary, secondary, and tertiary air having the lightweight grains toward a horizontal tangential direction from an upper portion of the primary separation space." The Applicant respectfully submits that amended claim 1 is allowable over the prior art, for at least the reason that it still recites the patentable feature of "a secondary separation step of blowing secondary air . . . toward an upwardly beveled surface of a stabilizer provided centrally in the lower portion of the conical secondary separation space," as set forth in the Office Action's reasons for indication of allowable subject matter.

Rejections under 35 U.S.C. § 112

The Office Action rejected claims 3, 5, 10, and 12 under 35 U.S.C. § 112, second paragraph, as being indefinite for two different reasons.

(1) The Office Action asserted that claims 3 and 10 are indefinite for reciting secondary and tertiary air blowing units without reciting a first or primary air blowing unit. Claim 3 has been amended to recite that the “raw grain feeding unit [feeds] raw grains together with primary air,” and claim 10 has been amended to recite that the “grain feeding unit [feeds] grains together with primary air.” The Applicant submits that the amendments to claims 3 and 10 overcome the alleged indefiniteness.

(2) The Office Action asserted that claim 3 is indefinite for reciting “an exhaust port” and “a lightweight grain-separating unit.” The Office Action asserted that it is unclear if the recited elements are separate or related. Claim 3 has been amended to recite “a lightweight grain separating unit for taking air . . . out from the upper portion of the cylindrical section through the exhaust port.” The Applicant submits that this amendment removes the alleged lack of clarity regarding the relationship between the exhaust port and the lightweight grain-separating unit.

The Office Action further asserted that the language “against the whirling direction of the raw grains” of claim 3 is functional and is not given patentable weight. Claim 3 has been amended to remove this claim language.

In view of the foregoing, the Applicant respectfully requests that the rejections of claims 3, 5, 10, and 12 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Rejections under 35 U.S.C. § 102

The Office Action rejected claims 10 and 12 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,872,973 to Ikebuchi et al. Claim 10 is the independent claim. The Applicant respectfully traverses this rejection for the following reason.

Claim 10, as amended, recites a “cylindrical section comprising a peripheral wall having an opening” and “an exhaust pipe extending horizontally and tangentially from the opening.” Ikebuchi does not disclose the claimed arrangement. The Office Action aligns the cylindrical body 20 of Ikebuchi with the claimed “cylindrical section,” and aligns the outlet pipe 4 of Ikebuchi with the claimed “exhaust pipe.” However, the outlet pipe 4 of Ikebuchi does not “extend[] horizontally and tangentially from [an] opening” in “a peripheral wall” of Ikebuchi’s cylindrical body 20. Instead, as shown in FIG. 2 of Ikebuchi, the outlet pipe 4 extends *vertically* and *axially* from an open upper end of the cylindrical body 20. Therefore, Ikebuchi does not disclose a “cylindrical section comprising a peripheral wall having an opening” and “an exhaust pipe extending horizontally and tangentially from the opening,” as recited by amended claim 10.

Claim 12 depends from claim 10, and is patentable over Ikebuchi for at least the same reason.

Rejections under 35 U.S.C. § 103

The Office Action rejected claims 3 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Ikebuchi in view of U.S. Patent No. 4,776,950 to Green et al. Claim 3 is the independent claim. The Applicant respectfully traverses this rejection for the following reason.

Claim 3, as amended, recites “a cylindrical section comprising a peripheral wall defining an exhaust port” and a “lightweight grain separating unit extending horizontally and tangentially from the exhaust port.” No reasonable combination of Ikebuchi and Green discloses or suggests the claimed arrangement. The Office Action aligns the opening 18 of Green with the claimed “exhaust port.” However, Green does not disclose or suggest a “lightweight grain separating unit extending horizontally and tangentially from” opening 18. Instead, as shown in Green’s Fig. 2, a receptacle 12 extends *vertically* from opening 18. (See Green at Fig. 2; column 3, lines 48-52.) Ikebuchi does not provide the missing disclosure or suggestion of this claim feature. Therefore, no reasonable combination of Ikebuchi and Green discloses or suggests “a cylindrical section comprising a peripheral wall defining an exhaust port” and a “lightweight grain separating unit extending horizontally and tangentially from the exhaust port,” as recited by amended claim 3.

Claim 5 depends from claim 3, and is patentable over Ikebuchi and Green for at least the same reason.

New Claims 13-15

New dependent claims 13-15 have been added to recite additional features. Specifically, new claim 13 depends from claim 1, and recites that “in the primary separation step, the primary air is introduced into the cylindrical primary separation space in a tangential direction, and the exhaust port is arranged in an opposite direction to the tangential direction.” The Applicant respectfully submits that new claim 13 is patentable for the same reasons as claim 1, as well as

for reciting additional features.

New claim 14 depends from claim 3, and recites that “at least a portion of the upwardly beveled surface of the stabilizer is located below the slit.” New claim 15 depends from claim 10, and recites that “at least a portion of the upwardly beveled surface of the stabilizer is located below the circumferential slit.” Neither Ikebuchi nor Green, nor any reasonable combination of the two, discloses or suggests the claimed feature. For example, the upwardly inclined surface of Ikebuchi’s conic 5 is located *entirely above* the inlets in the conical portion 1a. (See Ikebuchi at FIG. 2.) Green does not provide the missing teaching or suggestion. Therefore, the Applicant respectfully submits that new claims 14 and 15 are patentable over any reasonable combination of Ikebuchi and Green.

Conclusion

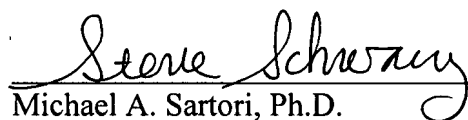
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant, therefore, respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

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Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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